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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,984	08/18/2003	Henricus Peerlings	PO-7784/LeA 36,205	3487

157 7590 12/19/2005

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EXAMINER	
SERGENT, RABON A	
ART UNIT	**PAPER NUMBER**
1711	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/642,984	PEERLINGS ET AL.	
	Examiner	Art Unit	
	Rabon Sergent	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-5,8,10 and 11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-5,8,10 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 4, 2005 has been entered.

2. The terminal disclaimer filed on November 4, 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,930,162 has been reviewed and is accepted. The terminal disclaimer has been recorded.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 3-5, 8, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quiring et al. ('684) in view of Pelletier et al. ('047) or Lee ('914) or Lee et al. ('562).

Quiring et al. disclose thermoplastic polyurethanes derived from reactants that correspond to applicants' components (A), (B), and (C) that may be produced by the prepolymer process. See abstract; column 1, lines 55+; column 2; and column 3, lines 12-14. Quiring et al. further disclose within Tables 6 and 8 that tensile strengths in excess of 35 MPa are realized.

5. Quiring et al. fail to disclose applicants' component (D); however, the use of isocyanate reactive phosphonates and phosphine oxides, which correspond to those of applicants, as reactants for the production of polyurethanes was known at the time of invention. Pelletier et al. disclose that the incorporation of hydroxyl functional phosphonates within a polyurethane composition conveys fire retardant properties to the polymer. See abstract and column 1. Similarly, Lee discloses that the incorporation of hydroxyl functional phosphine oxides within a polyurethane composition conveys fire retardant properties to the polymer. See abstract. Lee et al. discloses that that the incorporation of hydroxyl functional phosphine oxides within a polyurethane composition improves physical properties such as increasing tensile strength. See abstract; column 2, lines 32+; and column 5, lines 32-36.

6. Therefore, in view of the advantages of incorporating hydroxyl functional phosphonates or phosphine oxides into polyurethanes, as demonstrated by the secondary references, the position is taken that it would have been *prima facie* obvious to one of ordinary skill in the art to incorporate such compounds into the thermoplastic polyurethane of Quiring et al., so as to obtain a product having improved fire retardancy and/or increased tensile strength.

7. The prior art rejection has been reinstated in view of applicants' amendments removing the requirement that polyol B) be a polyether polyol. Applicants' remarks of June 20, 2005 are no longer commensurate in scope with the claims. Applicants' argued example 5 is based upon a

polyether polyol; therefore, this example is not commensurate in scope with the claims. Furthermore, since the claims are no longer limited to polyether polyols, the position is taken that of the various polyols disclosed within the prior art, the polyether polyol not necessarily the most relevant disclosed species; therefore, applicants' comparative examples based upon polyether polyols are not adequately representative of the prior art.

8. Claims 3-5, 8, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Batt et al. ('617) in view of Pelletier et al. ('047) or Lee ('914) or Lee et al. ('562).

Batt et al. disclose thermoplastic polyurethanes derived from reactants that correspond to applicants' components (A), (B), and (C) that may be produced by the prepolymer process. Batt et al. further disclose that tensile strengths greater than 35 MPa may be realized. See abstract; column 1, lines 49+; columns 2-4; column 5, lines 3-2, and Table 8.

9. Batt et al. fail to disclose applicants' component (D); however, the use of isocyanate reactive phosphonates and phosphine oxides, which correspond to those of applicants, as reactants for the production of polyurethanes was known at the time of invention. Pelletier et al. disclose that the incorporation of hydroxyl functional phosphonates within a polyurethane composition conveys fire retardant properties to the polymer. See abstract and column 1. Similarly, Lee discloses that the incorporation of hydroxyl functional phosphine oxides within a polyurethane composition conveys fire retardant properties to the polymer. See abstract. Lee et al. discloses that that the incorporation of hydroxyl functional phosphine oxides within a polyurethane composition improves physical properties such as increasing tensile strength. See abstract; column 2, lines 32+; and column 5, lines 32-36.

10. Therefore, in view of the advantages of incorporating hydroxyl functional phosphonates or phosphine oxides into polyurethanes, as demonstrated by the secondary references, the position is taken that it would have been *prima facie* obvious to one of ordinary skill in the art to incorporate such compounds into the thermoplastic polyurethane of Batt et al., so as to obtain a product having improved fire retardancy and/or increased tensile strength.

11. The prior art rejection has been reinstated in view of applicants' amendments removing the requirement that polyol B) be a polyether polyol. In view of the amendment, applicants' remarks of June 20, 2005 are no longer commensurate in scope with the claims.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

RABON SERGENT
PRIMARY EXAMINER

R. Sergent
December 9, 2005